

# THE EXISTING SPECIES OF THE GENUS PHASCOLOMYS.

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(Plates 9, 10, 11.)

In this paper we propose to deal principally with the question of the relation to one another of the species of *Phascodomys* that have been described as inhabiting Victoria, Tasmania, and the Islands of Bass Strait. At the present time, three existing species of the genus are recognised in Australia, viz. :—*Ph. ursinus* of Tasmania and the Islands of Bass Strait, *Ph. mitchelli* of Victoria, New South Wales, and South Australia, and *Ph. latifrons* of South Australia. The latter with its almost silky fur, its hairy nose, and strongly marked post-orbital processes, is a very clearly defined species.

Until quite recently it was supposed that the Bass Island forms were extinct, and *Ph. ursinus* has been known only by specimens from Tasmania. Mr. Oldfield Thomas,\* describing the latter animal, says—“This species, the oldest known of the group, presents a remarkable exception to the usual rule of size in Tasmanian animals, these being generally larger instead of smaller than their continental allies. The species seems to be well distinguished from *Ph. mitchelli* by this character of size, but otherwise there appears to be no difference of importance between the two.”

The investigation of a collection of sub-fossil bones from King Island has caused us to inquire into the history of this species, an outline of which we propose to give.

During the year 1797, a ship called the *Sydney Cove* ran on shore in Bass Strait, between Preservation and Rum Islands, which form part of the Furneaux group, and lie off the south-west coast of Flinders Island. Hunter, then Governor of New South Wales, sent a boat down from Sydney to rescue the ship-wrecked crew, and this party brought back with it the first found wombat†. It only lived six weeks in captivity, and in August, 1798, Hunter sent its body to England “for the inspection of the learned members of the Literary and Philosophical Society of Newcastle-upon-Tyne.”

\* *Brit. Mus. Cat.* 1888, p. 217.

† It is, however, difficult to say positively whether this first wombat was brought back to Sydney by the first expedition sent to rescue the crew of the *Sydney Cove* or by Flinders himself when he went down on a second expedition to the scene of the wreck in the schooner *Francis*, leaving Port Jackson on February 1, 1798, and returning on March 9th.

Early in 1798, Bass had made his celebrated expedition in a whale boat, penetrating the strait that now bears his name, and in October of the same year, accompanied by Flinders, he again set out, this time in a small sloop called the *Norfolk*. During this expedition he found and brought back a wombat from Cape Barren Island.\* It is commonly stated that Bass found the first wombat, but this is not so. As a matter of fact, Hunter sent his specimen to Newcastle in August, 1798, and Bass only returned to Sydney with his in January, 1799. It is also evident that Flinders knew of the existence of the animal when, late in 1798, he accompanied the schooner *Francis* on its second visit to the wreck of the *Sydney Cove*. He refers several times to it, calling it by its native name, that is, the name applied to the mainland form by the aborigines of New South Wales. Thus, for example, he says†—"The stations whence angles were taken for a survey of the channel and surrounding lands, were—first, Point Womat, a rocky projection of Cape Barren Island;" and, again, speaking generally of the Furneaux Islands,‡ he says—"No other quadrupeds than the kangaroo, womat, and duck-billed aculeated ant-eater were found upon the islands;" and, lastly, he says§—"Clarke's Island afforded the first specimen of the new animal called *Womat*, but I found it more numerous upon that of Cape Barren; Preservation and the Passage Isles do not possess it. The little bear-like quadruped is known in New South Wales, and called by the natives womat, wombat, or womback . . . . . it burrows like a badger, and on the continent does not quit its retreat till dark; but it feeds at all times on the uninhabited islands, and was commonly seen foraging amongst the sea refuse on the shore, though the coarse grass seemed to be its usual nourishment."

In 1800, Bewick issued the fourth edition of his *History of Quadrupeds*, and in this|| appears in full the letter dated August 5th, 1798, addressed by Hunter to the Philosophical Society of Newcastle, in which he states the position of the island on which the animal was found and describes it.¶ Amongst other things he says—"It is about the size of a badger, a species of which we supposed it to be from its dexterity in burrowing in the earth, by means of its fore paws; but on watching its general motions, it appeared to have much of the habits and manners of a bear. . . . This animal has lately been discovered to be an inhabitant of the interior of the country also. . . . The natives call it womback."

This is undoubtedly the earliest notice published of any species of *Phascolomys*, and was indeed the only description of the animal

\* Collins. *An Account of the English Colony of New South Wales*, 2nd Edit., 1804, p. 469.

† Flinders. *Voyage to Terra Australis*, 1814, Vol. i. Introduction, p. cxxviii.

‡ *Loc. cit.*, p. cxxxiv.

§ *Loc. cit.*, p. cxxxv.

|| 4th Ed., 1800, p. 522.

¶ The latitude of the Island is given as 40° 36' S., thus proving conclusively that, as Flinders says, the first wombat came from Clarke Island.

sent to Europe up to the year 1800. Bewick gives no scientific name to the animal, but above Hunter's letter appears a quaint figure of the animal, which is entitled "The Wombach." There can be no doubt that this account formed the source of information upon which Shaw founded his very brief description of *Didelphis ursina*.

His description reads as follows:—\*

"Ursine opossum."

"*Didelphis ursina*. *D. flavescens labio superiore bifido*.

Yellowish O. with bifid upper lip.

The largest of all the opossums: size of a badger: colour, pale yellow: fur, longish and sub-erect: nose strongly divided by a furrow.

Native of New Holland: a species very lately discovered and not yet fully or satisfactorily known or described."

The letter from Hunter, and Shaw's brief description, seem to have attracted no attention, but when, in 1802, Collins† published his *Account of the English Colony in New South Wales* he included in it Bass' description of the specimen that was captured on Cape Barren Island. It is, at least, a curious fact that in this lengthy account no reference whatever is made to Hunter's specimen; on the contrary Collins speaks of Bass' finding on Cape Barren Island "a new quadruped which was also a grass eater." He goes on to say—"This animal, being a stranger, appears to merit a particular description. The wom-bat (or, as it is called by the natives of Port Jackson, the *Wombach*) is a squat, thick, short-legged, and rather inactive quadruped, with great appearance of stumpy strength, and somewhat bigger than a large turn-spit dog." It is difficult to account for this, because certainly Flinders, and without doubt Bass also, were well aware of the previous capture of wombats on Clarke Island; it is indeed, as pointed out previously, quite possible that the first specimen was actually captured by Flinders himself.

In describing the animal from Bass' notes, Collins says that its head measures 7 inches in length, the body  $23\frac{5}{16}$  inches, and that its weight was from 25 to 30 lbs. The animal was a female, and amongst wombats this sex is heavier than the male. Collins describes how Bass chased one "and with his hands under the belly suddenly lifted him off the ground and laid him upon his back, along his arm, like a child. . . . He carried the beast upwards of a mile, and often shifted him from arm to arm, sometimes laying him upon his shoulder, all of which he took in good part, until being obliged to secure his legs while he went into the brush to cut a specimen of new wood, the creature's anger arose with the

\* General Zoology, 1, Pt. 2, p. 504

† 1st Ed., Vol. ii., p. 153; 2nd Ed., 1804, p. 466. In this work an account is given of Bass and Flinders' voyage in the *Norfolk*, during which they finally proved Tasmania to be an island.

pinching of the twine ; he whizzed with all his might, kicked, and scratched most furiously, and snapped off a piece from the elbow of Mr. Bass' coat." To those who are acquainted with the animals in their living state, the idea of Bass carrying for a mile, apparently with ease, a full-grown female specimen of *Phascolomys ursinus* (as at present recognised) which does not usually weigh much less than 50 lbs., is suggestive of some mistake having been made in this account. It would take a very strong man to hold and carry a full-grown Tasmanian wombat if it behaved as Mr. Bass' specimen did, *i.e.*, "whizzed with all his might, kicked, and scratched most furiously." By some curious error, either Bass or Collins confused the account of the wombat with that of some other animal in regard to the teeth. Towards the close of his description, which is otherwise quite correct, Collins wrote—"The opening of its mouth is small ; it contains five long grass-cutting teeth in the front of each jaw, like those of the kangaroo : within them is a vacancy of an inch or more ; there appear two small canine teeth of equal height with, and so much similar to, eight molars, situated behind, as scarcely to be distinguishable from them. The whole number in both jaws amounts to twenty-four." The description is accompanied by a drawing of the animal, which is quaint but unmistakable, and bears a strong resemblance to, though it is much larger than, Bewick's figure. The style of drawing and curious pose of the animal, the position of the front and hind legs and of the head—all of these are identical in the two illustrations. We think there is very little doubt that they were drawn by the same hand. There is no evidence that any white man, up to that time, had ever seen the mainland wombat—all that they knew was that a similar creature did exist in New South Wales.

In neither Bewick's nor Collins' account was any scientific name applied to the animal.

During the years 1800-1804, the celebrated French expedition under the command of Baudin was engaged in exploration around the coast of Australia and Tasmania.

One of Baudin's ships, the *Naturaliste*, sailed for Europe in 1802, parting from the other two ships, the *Geographe* and *Casuarina*, at King Island. The *Naturaliste* carried to Europe specimens of the wombat, which presumably came from King Island, though this is not definitely stated. In 1803, E. Geoffroy published a preliminary description\* of the animal brought to Europe by the *Naturaliste*, and proposed the generic name of *Phascolomys*. Evidently he was quite unacquainted with the works of Bewick and Shaw, but had seen Collins' account, because he says that the animal described by Bass, "a le porte de nos nouveaux animaux : mais il en est bien certainement différent, si les observations qui ont été publiées sur leurs dents sont exactes." He adds, "Ils ont été trouvés à la côte occidentale de la

\* *Annales du Muséum d'histoire naturelle*, Vol. 2, 1803, p. 364.

Nouvelle-Hollande." In those early days, ideas with regard to Australian geography were naturally rather vague. Geoffroy says that the wombats were 17 inches long, but as they were young, there was reason to think that if the two that remained could be kept alive, they would reach the size of a badger. He also adds that they appear to be endowed with very little energy, they prefer to sleep during the day, and, like burrowing animals, search for their food at night time.

In the same year, Desmarest mentioned the animal under the name of *Wombatus fossor*.\* It is evident that he had not seen, or at least, carefully investigated a specimen. Sevastianof, writing in February, 1807, describes the skins of two quadrupeds sent to the Museum in St. Petersburg by a correspondent of the Academy, living in London, named Waxel.† One of these was a specimen of *Dasyurus maculatus*, the other was a species of wombat "decouvert" says Sevastianof, "par les navigateurs anglois Bass et Flinders dans la nouvelle Galle du Sud." He goes on to quote Desmarest's description of *Wombatus fossor*, and adds finally, "Desmarest a rangé ce quadrupede dans le même ordre et sous-ordre, que Dasyure tacheté. Il est earnassier par ee qu'il a six incisives et deux canines à chaque machoire." Sevastianof had only a skin, of which he gives a very fair figure, and it is evident that Desmarest's name was applied in the first instance to the specimen secured by Bass.

In 1807 there appeared also the first edition of the first volume of the letterpress of Péron's Voyage; the atlas to this appeared in 1808.‡ In the first edition, there appears a plate,§ drawn by Lesueur, with the following legend—"Nouvelle-Hollande: île King. Le wombat (*Phaseolomys wombat*)." Good drawings are given of a light and dark variety of the animal, together with four young ones. The letterpress describes how four naturalists, including Péron and Lesueur, were left stranded on King Island, when a violent gale forced the exploring vessels to stand out to sea. The naturalists were hospitably entertained by some English sealers, the leader of whom was a man named Cowper, from whom they gathered many particulars concerning especially the emu that then existed in large numbers on the island. Unfortunately, beyond describing how Cowper and his associates had domesticated the wombats, which went out during the day-time to feed in the scrub and returned at night-time to the huts, and describing also the value of the animal as an article of food,

\* Desmarest. *N. Dict. d'Hist. Nat.*, xxiv., p. 14. We have unfortunately been unable to refer to this work and give the reference according to Sevastianof.

† Sevastianof. *Mem. de l'Acad. de St. Petersbourg*, i., 1807, p. 443. Plate 17.

‡ Péron et Freycinet. *Voyage de Découvertes aux Terres Australes*. The letterpress and atlases were issued separately. Of the two volumes of letterpress, the first edited by Péron appeared in 1807, the second edited first by Péron, and, after his death, continued by Freycinet, appeared in 1816. The first part of the atlas, with forty-one plates of views and illustrations of Natural History objects by Lesueur and Petit appeared in 1808, the second part, edited by Freycinet, containing fourteen charts, appeared in 1811. A second edition of part i. of the atlas, containing sixty-eight plates, appeared in 1824.

§ Plate 28. In the second edition it is plate 58.

they tell us very little about it. In one part Péron says that later on he intends to deal in greater detail with the animals to which he makes brief reference, but unfortunately, he died before his work was completed, and in regard to the Bass Island wombat, the only really valuable record in Péron's work is this plate. Possibly the figures were drawn from life by Lesueur during his enforced stay on the Island. The legend attached to the plate proves clearly that in 1808, the name *Phascolomys wombat* was applied by Lesueur and Petit to the King Island species.

In the year 1802, also, Charles Grimes,\* Acting Surveyor-General of New South Wales, made a voyage of discovery in the *Cumberland* from Sydney to King Island, and in a journal kept by Flemming, it is stated that the party from his ship met the members of the Baudin expedition, and that "the captain (Robbins) hoisted His Majesty's colours behind the French tents." The journal also says that on Thursday, 30th December, 1802, they "caught four emus, three badgers, three porcupines, and a kangaroo"—badger being the popular name then applied to the wombat.

While Baudin with his three boats, the *Geographe*, *Naturaliste*, and *Casuarina*, was exploring the southern coasts of Australia, he met Flinders at Encounter Bay. Flinders, in the *Investigator*, had previously to this visited King Island and there found the wombats† which were well-known to him after his experiences amongst the islands of the Furneaux Group. He says—"On stepping out of the boat, I shot one of those bear-like little quadrupeds, called womat, and another was afterwards killed." Flinders was detained by the French at Mauritius, but material collected by Brown, who accompanied him as a naturalist, evidently reached Europe safely, for in 1808, Everard Home read a paper before the Royal Society in which he embodied an anatomical account of it written by Brodie.‡ Home says that the wombat was a male, that it "was brought from the islands in Basse's Straits by Mr. Brown, the naturalist attached to Captain Flinders' voyage of discovery. It lived in a domesticated state for two years. . . . It was quiet during the day, but constantly in motion during the night. . . . It appeared to have arrived at its full growth, weighed about 20 lbs., and was about 2 feet 2 inches long."

In 1811, Illiger enumerated two forms under the names respectively of *Phascolomys fusca*, Geoff., and *Amblotis fossor*, the latter genus being founded because Illiger, on account of the wrong description of the teeth given by Collins, naturally imagined that the animal originally described under the name *Vombatus* could not be the same as that to which the generic title *Phascolomys* was afterwards given. The latter animal he distinguished as *Phascolomys fusca*.§

\* Historical Records of Port Phillip. Edited by Shillinglaw, 1879.

† *A Voyage to Terra Australis*, 1814, p. 206.

‡ *Trans. R.S.*, 1808, p. 304.

§ *Prodr. Syst. Mamm. et Avium*, 1811, pp. 77-78.

We now come to a description by Leach, published in 1815,\* in his *Zoological Miscellany*. In the matter of brevity and inadequateness, it much resembles the original one of Shaw, but it is accompanied by a better figure. The description is as follows:—"Phascolomis Vombatus. P. pallidé fulvescente-brunneus: naso obscuriore; unguibus elongatis. Wombach. Bewick, Gen. Hist. of Quadrup., Ed. 4, p. 522. Habitat in Australasia." Then he goes on, "Wombat phascolomis. Pale fulvescent-brown: nose darker: claws elongated: inhabits New Holland.

For an account of the anatomical structure of the Wombat Phascolomis, see Philosophical Transactions for 1808. It is named Wombat, or Wombach, by the natives of New South Wales, who kill it for food, its flesh being considered very delicate. The usual length of this animal is about 2 feet, exclusive of the tail." Reading this, one would feel doubtful as to whether the writer had ever seen the animal, but on referring to Gray's *List of the Specimens of Mammalia in the collection of the British Museum*, p. 95, published in 1843, the following entry occurs:—"b. Young: discoloured, having been in spirits. (The one figured in Leach, Z. Misc. t. 69)." Only five specimens of wombat are recorded, the one mentioned above, two from New Holland, one from Mr. Gould's collection, and a young one from Van Diemen's Land. No locality is given for Leach's specimen, nor does he help us in his own description, beyond saying that its habitat is New Holland, and that Home described the anatomy of the species. Home's specimens we know came from King Island. In Thomas' catalogue (1888), apparently the same specimen is described as a young skin, and the locality of Tasmania is ascribed to it. It would be interesting to know the definite authority for this locality, as, up to the time when Leach published, that is, twenty-eight years before Gray's catalogue was issued, there is no record of any true Tasmanian specimen having been sent to Europe.

It is to be presumed that, as neither Gray nor Leach in 1815, nor Gray in 1843, give any definite locality for this particular specimen, none was known when those writers published, more especially since Gray carefully gives the locality of every other specimen. So far as the name is concerned, it does not matter, inasmuch as that of *Phascolomys Wombat* had been applied to the King Island species eight years before Leach published his description. There can, however, be no reasonable doubt that the specimen described by Leach came from the Bass Strait Islands.

Cuvier, writing in 1817,† describes and figures the animal and its skull. He says that only one species is known, which is of the size of a badger and lives on King Island‡ and that this is identical

\* Leach, p. 102, Pl. 96.

† Geo. Cuvier. *Regne Animal*, Pl. 51.

‡ He was acquainted with Bass' animal, which was, he says, externally the same as the wombat, but had a different dentition, and refers to Illiger therefor calling it *Amblotis*.

with Shaw's *Didelphis ursina*. The figure that he gives is one of a brown variety, and was drawn from a stuffed specimen in the Paris Museum—presumably one of those captured during Baudin's expedition. Lesson and Garnot, describing the zoological results of Duperry's voyage in 1826, say\*—"Nous ne trouvâmes qu'une seule peau de wombat on phascolome à Sydney (*didelphis ursina*, Shaw; *phascolomys wombat*, Pér. et Les.) animal qu'on n'observe que sur la côte sud et dans les petites îles du détroit de Bass."

In 1831, Owen, when describing the specimens of wombat in the collections of the Royal College of Surgeons,† stated definitely that the distribution of *Phascolomys Wombat* was "King Island and near Port Jackson," and makes no reference at all to Tasmania.

It is, we think, quite certain from the above records that before the year 1831 no wombat had been sent to Europe from Tasmania.‡ With the solitary exception of the skin which Lesson and Garnot mention as found in Sydney in 1826, there is no record of a specimen actually secured on the mainland, and even in this instance there is no proof that the skin was that of a mainland animal. It is quite likely that it had been brought to Sydney from one of the Islands in Bass Strait. It is difficult to believe that no specimens were sent from New South Wales, but, if any were, no record of them appears to have been published, and, apparently, it was taken for granted that the wombats of King, Clarke, Cape Barren, and other islands in Bass Strait were identical with those of New South Wales; indeed, Owen's statement in regard to the distribution of *Phascolomys Wombat*, quoted above, makes this quite clear.

In 1838, Ronald Gunn,§ one of the earliest naturalists in Tasmania, contributed to the *Annals of Natural History* a paper entitled "Notices of some Mammalia and Fish from Van Diemen's Land," and to this, Gray added some notes in which, referring to the wombat, he says—"I have seen Bass' specimen, which is now in the museum of the Natural History Society of Newcastle-on-Tyne; it is the same as the one we now usually receive from Van Diemen's Land, only discoloured by having been kept in spirit." It is evident that this particular specimen must have been the one sent to England by Hunter, and not by Bass.

In 1838, Owen described a mutilated sub-fossil cranium found by Mitchell in the Wellington Valley in New South Wales, under the name of *Phascolomys mitchelli*—this being the first occasion on which a distinct name was given to a mainland form.|| In his description,

\* Duperry. *Voyage Autour du Monde*. Zoologie par Mm. Lesson et Garnot, Tome i., 1826 p. 399.

† *Cat. R.C.S.*, 1831. p. 78.

‡ In 1831, a large wombat reached England, but whether it came from Tasmania or Australia is not known. This particular animal lived in the Zoological Society's gardens for five years; in 1836 it died, and its anatomy was described by Owen.

§ Gunn. *Ann. Nat. Hist.* 1., p. 103, 1838. Gray's note is on p. 107.

|| Mitchell's *Three Expeditions into the Interior of Eastern Australia, &c.* Letter from Owen, dated May 8th, 1838, containing, *inter alia*, description of *Phasc. mitchelli*.



Owen remarks that it is a little larger than the largest wombat's cranium in the Hunterian collection. This is not surprising, since the latter specimens were all presented by Home, and came from King Island.

In 1836, Owen described the anatomy of a specimen\* under the name of *Phascolomys wombat*, Péron, at the same time making the following remarks:—"The individual lately dissected at the museum of the Zoological Society had lived at the gardens upwards of five years. The one dissected by Sir Everard Home in 1808 was brought from one of the islands in Bass Strait, and lived as a domestic pet in the house of Mr. Clift for two years. This animal measured 2 feet 2 inches in length, and weighed about 20 lbs. It was a male. The society's specimen was a female and weighed, when in full health, in October, 1833, 59½ lbs." Owen does not say where his specimen came from. The first definite notice of the existence of a wombat in Tasmania that we can find is in the paper published by Gunn in 1838, to which we have already referred. The author, Mr. Ronald Gunn, was well known as a naturalist in the early days of Tasmania.† In this he describes the animal under the generic title *Phascolomys*, but gives no specific name. He states that one large specimen that he secured measured 36 inches from snout to tail, and 34 inches in circumference.

Waterhouse,‡ writing in 1841, accepts the name *Phascolomys wombat*, and says that "the wombat is found in New South Wales, South Australia, and Van Diemen's Land, as well as in some of the Islands in Bass's Straits." Gunn's collection was presented to the British Museum, and possibly it included the young specimen mentioned by Gray in his catalogue,§ with the locality given as Van Diemen's Land. So far as we can ascertain this was the first occasion on which a specific name was applied to a definite example of a Tasmanian wombat, Gray regarding it as an example of *Phascolomys ursinus*.

In 1845, Owen in his article on Marsupialia in *Todd's Cyclopaedia*,|| deals with many points in the anatomy of the wombat and figures a complete skeleton, the name *Phascolomys fusca* appearing under the figure. This is the only mention that he makes of this specific name. In the same year he exhibited at a meeting of the Zoological Society¶ "the skull of a wombat (*Phascolomys vombatus*, Auct.) from Van Dieman's Land, and the skull of a wombat transmitted by Governor Grey from Continental (South) Australia." He pointed out their differences and named the new continental form *P. latifrons*. In 1847\*\* Gray drew attention to certain differences

\* *P.Z.S.*, 1836, Pt. 4, p. 49.

† "Notices accompanying a Collection of Quadrupeds and Fish from Van Diemen's Land. *Annals Nat. Hist.*, Vol. i., 1838, p. 101.

‡ *Jardine's Naturalist's Library*, 1841, p. 300.

§ *List of the Specimens of Mammalia in the Collection of the British Museum*, 1843, p. 95.

|| Vol. iii., 1839-1847, fig. 105.

¶ *P.Z.S.*, 1845, Pt. xiii., p. 82.

\*\* *P.Z.S.*, 1847, Pt. xv., p. 41.

in the teeth of three skulls, two from Van Diemen's Land, and one from New South Wales, and suggested that there might be more than one species confounded under the name *Phascolomys vombatus*. Matters remained in this state until, in 1853, Owen described two skulls in the collection of the Royal College of Surgeons\* as distinct from *Phascolomys vombatus*. For these he proposed the name *P. platyrhinus*, that is, under different names as regards two of them, Owen at that time recognised the three recent species that are now accepted, viz., *Phas. vombatus* (= *Phas. ursinus*), *Phas. platyrhinus* (= *Phas. mitchelli*), and *Phas. latifrons*. Apparently, however, he regarded the first of these as distributed on the mainland as well as in Tasmania and the islands. Some confusion arose in regard to the South Australian species, named originally by Owen on the strength of a skull only. When the skin of the hairy-nosed wombat of South Australia was first seen it was not identified as belonging to the same animal to which Owen gave the name *P. latifrons*. Gray accordingly founded a new genus and species for it,† *Lasiacanthus m'coyi*; Gould called it *Phascolomys lasiorhinus*‡ and Krefft described a dark variety under the name of *P. niger*.§ Of the distinctness of *P. latifrons* there is no doubt. There remains the question of the Eastern mainland species, that of Tasmania, and that of the islands.

In 1865, Murie published a paper dealing in detail with the various species.|| He came to the conclusion that *P. mitchelli* and *P. platyrhinus* were identical, but retained the latter name for the recent species, and also, like Owen, recognised two other species—*Phascolomys wombat* and *Phascolomys latifrons*. These results he confirmed in 1867, but curiously says nothing definite with regard to the geographical distribution of the species. McCoy, writing of *Phascolomys wombat* in 1868,¶ said, "This is now known to be confined to Tasmania and other islands south of the Australian continent, and as I have demonstrated from the specimens on the table, it is specifically distinguishable with ease and certainty by the characters of the skull and skin, pointed out by Dr. Murie and others, from the wombats of the mainland, which were at one time supposed to be referable to it." Krefft,\*\* in 1871, says again that *Phascolomys wombat* "is peculiar to Tasmania and the islands of Bass Strait. The New South Wales wombat (*Phascolomys platyrhinus*) is found on the east and south coast, extending even as far as Victoria, where also a brown variety occurs. This eastern wombat differs little from the Tasmanian one, except that it is larger and grows to over 80 lbs. in weight."

\* *Descriptive Catalogue Osteological Series, R.C. Surgeons, Vol. i. 1853 p. 334.*

† *A. M. N. H. 1863, p. 854.*

‡ *Mammals, Pls. 59 and 60. 1863.*

§ *Mammals of Australia, 1871. Text to Pl. v.*

|| *Murie. P.Z.S., 1865.*

¶ *Proc. R. S., Victoria, 1868, p. 266.*

\*\* *Mammals of Australia. Text to Pl. v.*

In 1888, Thomas published his well-known *Catalogue*, and in this used the names that have been applied ever since to the existing species, viz., *Ph. ursinus* for the Tasmanian and Bass Strait Island species; *Ph. mitchelli* for the common mainland form with naked muzzle; *Ph. latifrons* for the hairy-nosed, South Australian species.

The main points in regard to the history of the various species of wombat up to the present time may be briefly summarized as follows:—

- (1) The discovery of a wombat on Clarke Island in Bass Strait, to which the specific name of *ursina* was first given. (1797).
- (2) The discovery of a wombat on King Island. (1802).
- (3) The discovery of a wombat on the mainland of Australia, first in New South Wales, later in Victoria, supposed to be identical with the Bass Strait Island species. (Exact date uncertain).
- (4) The discovery of a wombat in Tasmania, supposed to be identical with the island and mainland species. (Exact date uncertain.)
- (5) The discovery of a fossil species (*Ph. mitchelli*) on the mainland. (1838.)
- (6) The discovery of *P. latifrons* in South Australia. (1845.)
- (7) The determination of *P. platyrhinus* on the mainland, as distinct from *P. ursinus* of Tasmania and the islands of Bass Strait. (1865.)
- (8) The discovery of the specific identity of *P. mitchelli*, the fossil form, and *P. platyrhinus*, involving the retention of the former name for the New South Wales and Victorian species. (1865.)
- (9) The discovery of sub-fossil remains of the King Island wombat.\* (1903.)
- (10) The discovery on Flinders Island by Mr. J. A. Kershaw of living specimens of wombats identical with the sub-fossil remains from King Island. (1908.)

A comparison of the skulls from King, Deal, and Flinders Islands shows that the same species of wombat was distributed over all three, and as Clarke and Cape Barren Islands form part of the Furneaux group, separated from Flinders Island and from one another by only shallow, narrow passages, we may safely conclude that the wombat which once existed on these two islands was identical with that on Flinders.

\* We have dealt at length with this in a previous paper. Cf. "A Collection of Sub-fossil Bird and Marsupial remains from King Island, Bass Strait." *Memoirs of Nat. Mus.*, Melbourne. No. 3, p. 28.

It is many years ago since the King Island wombat was exterminated. When the island was visited by a party of the Victorian Field Naturalists Club in 1887, no trace of it was discovered nor, during the process of clearing the land that has been vigorously carried on during recent years, has any record of a living wombat been made.

Flinders Island afforded the only prospect of securing a living specimen of the Bass Strait species, and in the hope of finding that the animal had not been completely exterminated there one of us (J. A. Kershaw) took advantage of a trip organized by the Australasian Ornithologists' Union to visit the island in November, 1908. A considerable part of the north, north-east, and north-west coast line was examined, and abundant evidence was obtained to prove that the animal, though very rare and difficult to obtain, was not extinct. In the deserted hut of a half-caste native at Killiecrankie two skins were found. On the extreme north end of the island an incomplete skeleton, including a skull with the skin still attached to it, was secured, and part of another skin on the north-east coast. On the island there are, in addition to a few settlers, a number of half-castes, or rather the much-mixed offspring of whites, Australian, and Tasmanian aborigines. The existence of the wombat is well-known to them, but it is by no means easy to secure. During the three days spent in searching no living animal was seen, and all that could be done was to make arrangements to have one sent to Melbourne when captured. On Cape Barren Island, where most of the half-castes live on the native reserve, the animal was found to be quite extinct, though well-known under the name of "badger," the common term "wombat" not being known there.

Though not successful in obtaining a living specimen, Mr. Kershaw's visit was the means of proving that the animal is still extant, and in addition to the sub-fossil remains from King Island we now possess also recent remains, including skins from Flinders Island.

In January, 1909, Dr. J. W. Barrett organized a trip to the islands, and kindly invited Mr. Kershaw to join the party, with the object of searching again for the animal. Once more, owing to the very limited time available, the search proved fruitless, but we are much indebted to Dr. Barrett for his cordial co-operation.

At the present time the matter stands thus: Evidence of the existence of a wombat is forthcoming in regard to King Island on the west side of Bass Strait, and Deal, Flinders, Barren, and Clarke Islands on the eastern side. Those of King, Deal, and Flinders Islands are specifically identical, and it may be taken for granted, as already said, that the same species inhabited Barren and Clarke Islands. The animal is now extinct everywhere except on Flinders Island.

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The specimen sent to Newcastle by Governor Hunter in 1798 belonged to this species, and it was to this that Shaw referred when he described the animal that he calls *Didelphys ursina*. At a later time other writers described the same species under other generic and specific names. In 1803, Geoffroy, ignorant of the fact that a specimen had been sent to England five years earlier, and briefly described by Shaw under the name of *Didelphys ursina*, proposed the generic name *Phascolomys*. The true designation of the wombat of the Bass Strait Islands is therefore *Phascolomys ursinus*, Shaw; and the following names, all of which have at one time or another been applied to the Island species, are synonyms of the former:—

- Wombatus fossor*, Desmarest (1803).
- Phascolomys wombat*, Péron et Lesueur (1808).
- Amblotis fossor*, Illiger (1811).
- Phascolomys fusca*, Illiger (1811).
- Phascolomys vombat*, Leach (1815).
- Phascolomys bassii*, Lesson (1827).

The question now arises as to the relationship of *Phascolomys ursinus*, the mainland species, and the Tasmanian species. There is no question as to the specific distinction of the hairy-nosed wombat, *Phascolomys latifrons*, of South Australia. The remaining mainland form, *Phascolomys mitchelli*, is closely allied to the Tasmanian form, which again, up to the present time, has been supposed to be identical with the Bass Strait Island species, that is *Phascolomys ursinus*. In the following tables we give the measurements of the skull, teeth series, &c., of a series of *Phascolomys* from Bass Strait Islands, Tasmania, and Victoria, as well as a certain number of *Phascolomys latifrons*.

Table 1.—Skull Measurements of *Phascolomys* from King and Deal Islands.

Number of Specimen ..	1.	2.	3.	4.	5.	6.	7.	8.	Deal Island Specimens.	
									Adult.	Juv.
Basal length ..	130	..	132.5	121	..	..	..	..	..	..
Greatest breadth ..	106	99	107	103	105	105	104	105	102	82
Nasal length ..	55	..	54	46	51	..	..	53	53	..
„ greatest breadth	40	..	44	39.5	41	..	..	39.5	39	30
„ least breadth ..	11	..	15	13	12.5	..	..	14	13	9
Interorbital breadth	40	38	47	42	41	42	43	41	41	..
Breadth between tips of postorbital processes ..	43	39	48.5	44.5	42	43	46	44	42	..
Constriction ..	33	32	36	33.5	34	33	36.5	30.5	36	..
Palate length ..	84	74	81	..	77	..	..	80	77	59
Diastema length ..	29.5	27	30	26	26.5	..	..	31	25	18
Palatine foramen ..	9	8.5	10	7.5	7.5	..	..	9	5.5	6
Basi-cranial axis ..	42	..	45	41	..	..	40	..	..	..
Basi-facial axis ..	91	81	90	83	82	..	..	83	83	63
Facial index ..	216.5	..	200	202.5	..	..	..	..	..	..
Length of tooth series	45	40	43	42	43	44.5	44.5	41.8	43	35

Table 2.—Skull Measurements of Phascolomys from Flinders Island.

Number of Specimen ..	1.	2.	3.	4.
Basal length .. .. .	133.5	..	..	..
Greatest breadth .. .. .	108(?)	104	..	..
Nasal length .. .. .	..	..	..	..
„ greatest breadth .. .. .	..	33	..	..
„ least breadth .. .. .	..	..	..	..
Interorbital breadth .. .. .	..	37	..	..
Breadth between tips of postorbital processes .. .. .	..	40	..	..
Intertemporal constriction .. .. .	..	..	..	..
Palate length .. .. .	80	78.5	..	..
Diastema length .. .. .	31	27	..	..
Palatine foramen .. .. .	8.5	9.5	..	..
Basi-cranial axis .. .. .	44	..	..	..
Basi-facial axis .. .. .	91	88.5	..	..
Facial index .. .. .	206.7	..	..	..
Length of tooth series—upper jaw .. .. .	41.5	41	..	..
„ „ lower jaw .. .. .	43	..	45	42

Table 3.—Skull Measurements of *Phascolomys mitchelli*.

Number of Specimen	1. Adult.	2. Adult.	3. Adult.	4. Juv.	5. Juv.	6. Juv.	7. Aged.	8. Adult.	9. Adult.	10. Aged.	11. Aged.	12. Adult.	13. Adult.	14. Adult.	15. Adult.
Basal length. . . . .	170	164	165	116	122	123	170	176	175	166	181	169	170	170	173
Greatest breadth . . . . .	134	135	127	91	102	101	142	147	141	133	155	138	146	134	135
Nasal length . . . . .	72	74	70	53.5	52	56	74	76	80	72	75	77	70	75	72
" greatest breadth . . . . .	52	52.5	52.5	36	41	38	61	60	58	56	63	55	54	48	54
" least breadth . . . . .	16	18.5	21	12.5	15	12	19	18	18	22	23	19	19	19	15
Interorbital breadth . . . . .	52.5	broken	55	39	42	41.5	65	61	59	60	69	61	65	55	57
Breadth between tips of post-orbital processes . . . . .	52.5	"	56	41	43	41	71	66	63	66	75	63	67	56	60
Intertemporal constriction . . . . .	45.5	"	44	37	40	36	51	54	48	55	60	52	46	46	48
Palate length . . . . .	111	106	106	75	81	79	110	115	116	109	122	111	111	109	112
Diastema length . . . . .	44	37.5	40	27	28	27	39	45	46	43	51	45	42	41	41
Palatine foramen . . . . .	14	9	11.5	7.5	9	6	6	9	8	9	8	10	11	10	10
Basi-cranial axis . . . . .	53	52	53	39	40	40	59	59	53	54	55	53	54	55	54
Basi-facial axis . . . . .	118	114	116	79	83	85	112	118	122	116	128	119	118	116	120
Facial index . . . . .	222	219	218	202	207	212	189.8	200	230	214.8	232.7	224.5	218.5	210	222
Length of tooth series . . . . .	51	52	50	38	42	40	53	55	54	51	54	53	52	53	52

Table 4.—Skull Measurements of Phascalomys from Tasmania.

	Number of Specimen	1.	2.	3.*	4.	5.	6. Old.	7.	8.	9.	10. Juv.	11.	12.	13. Juv.
Basal length	..	163	151	141	142.5	151	148	139	135	148	..	..	159.5	125
Greatest breadth	..	138	127	116	118	128	119	113	115	123	98	129	128.5	102
Nasal length	..	69	63	62	59.5	66	59	57	60	62	53.5	65	70.5	58.5
" greatest breadth	..	53	47	44	45.5	42	45.5	44	44	45	35	47	50	37
" least breadth	..	18.5	13	14	13	17.5	16.5	14	14.5	15	13	13	16	12
Interorbital breadth	..	60	52	47	48	48	53	44	45	50	38	52	50	41
Breadth between tips of postorbital processes	..	65	51	49	50	50	55	46	43	52	39	51	54.5	42
Constriction	..	48	39	39	40	40	39	34	36	41	31	39	45.5	33
Palate length	..	102	96	87	90	97	97	87	84	93	75	97	97	84
Diastema length	..	40	36.5	32	32.5	38	36	34	32.5	34	28.5	37.5	36	30
Palatine foramen	..	12.5	13.5	12	10	10	10.5	11.5	11.5	12	9	14	11	10
Basi-cranial axis	..	53.5	50	46	47	48	48	47	45	49	38	50	49	41
Basi-facial axis	..	111	104	96	96	104	101	93	92	100	77.5	101	102	86
Facial index	..	207	208	207.5	204.5	216.6	210	197.9	204	204.8	203	205	208	209
Length of tooth series	..	51	50	47	47	48	47.5	43	43	46	38	50	47	40

\* Type specimen of *Phascalomys tasmaniensis*.



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Table 5.—Skull Measurements of *Phascolomys latifrons*.

Number of Specimen ..	1.	2.	3.	4.	5.	6.
Basal length .. .. .	160	144	152	161	159	162
Greatest breadth .. .. .	134	116	125	126	130	128
Nasal length .. .. .	73	55	60	73	73	69
„ greatest breadth .. .. .	59	58	58	57	61	60
„ least breadth .. .. .	28.5	27	22	29	27	31
Interorbital breadth .. .. .	65	56	58	64	65	broken
Breadth between tips of postorbital processes .. .. .	77	67	66	77	75	80
Intertemporal constriction .. .. .	42.5	38	42	42	47	..
Palate length .. .. .	98	89	94	100	105	..
Diastema length .. .. .	42	37	40	42	38	40
Palatine foramen .. .. .	6	15	9.5	7	6	6
Basi-cranial axis .. .. .	49	47	49	54	52	52
Basi-facial axis .. .. .	112	98	104	117	110	107
Facial index .. .. .	228	208	212	216.6	211.5	205.7
Length of tooth series .. .. .	49	47	49	48	52	52

Table 6.—Measurements of Humerus.

—	King Island. Juv.	King Island. Agcd.	Flinders Island. Imm.	Flinders Island.	Tasmanian. Adult.	Tasmanian Adult.
Length .. .. .	71	98	90.5	..	110	110.5
Greatest width distal end .. .. .	17.5	42	41.5	42	..	..
—	Tasmanian. Adult.	Tasmanian. Imm.	Tasmanian. Imm.	Tasmanian. Imm.	P mitchelli.	P mitchelli.
Length .. .. .	114	115	115	111	128	126
Greatest width distal end .. .. .	52	..	..	..	..	..
—	P. mitchelli.	P. mitchelli. Imm.	P. mitchelli. Imm.	P. mitchelli. Agcd.	P. mitchelli.	P. latifrons.
Length .. .. .	125	122	122	117	116.5	111
Greatest width distal end .. .. .	..	..	..	53.5	..	..

Table 7.—Measurements of Femur.

—	King Island.	King Island.	Flinders Island.	Tasmanian. Adult.	Tasmanian. Adult.	Tasmanian Imm.
Length .. .. .	125	120	122	146	143	147

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Table 7.—Measurements of Femur—*continued*.

	Tasmanian. Imm.	Tasmanian. Juv.	Tasmanian. Juv.	P. mitchelli.	P. mitchelli.	P. mitchelli.
Length .. ..	144	147	141	171	170	161

  

	P. mitchelli. Imm.	P. mitchelli. Imm.	P. mitchelli.	P. latifrons.
Length .. ..	157	155	150	135

Table 8.—Measurements of Lower Teeth Series of King Island Specimens.

Number of Specimen ..	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Length of series ..	44	45.5	46	45	44.7	45	46	46	45.5	46

  

Number of Specimen ..	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
Length of series ..	46	42.5	41	44	44	45	42	43	44	44

  

Number of Specimen ..	21.	22.	23.	24.	25.	26.	27.	28.	29.*	30.*
Length of series ..	44.5	40	43.5	43.5	43.5	44	46	45	30	35.5

  

Number of Specimen ..	31.*	32.*	33.*	34.*	35.*	36.*	37.*	38.*
Length of series ..	34	29	33.5	31	31	32	33.5	36

\* Those marked with an asterisk are immature. In specimens numbered 29, 32, and 34, the fourth molars not yet in position.

Table 9.—Measurements of Lower Teeth Series of *Phascolomys mitchelli*.

Number of Specimen ..	1.	2.	3. Juv.	4. Juv.	5. Juv.	6. Juv.	7. Adult.	8.	9.	10.
Length, teeth series ..	52	52	44	43	44	44.5	52	52	52	54

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Table 10.—Measurements of Lower Teeth Series of Tasmanian Species.

Number of Specimen ..	1. Juv.	2.	3.	4.	5.	6.	7.	8.	9.
Length, teeth series ..	40	48.5	52	52	51	50	48	48.5	42*

\* M\* not in correct position.

Some of the main features in the above Tables may be summarized as follows:—

1.—King, Deal, and Flinders Islands Species.

Basal length ..	..	..	..	..	..	121	—	132.5
Greatest breadth ..	..	..	..	..	..	99	—	107
Teeth—upper series ..	..	..	..	..	..	40	—	45
„ lower series ..	..	..	..	..	..	41	—	46
Length of humerus ..	..	..	..	..	..	90.5	—	98
„ femur ..	..	..	..	..	..	120	—	125
Greatest width of humerus ..	..	..	..	..	..	41.5	—	42

2.—Tasmanian Species.

Basal length ..	..	..	..	..	..	135	—	151 (163)
Greatest breadth ..	..	..	..	..	..	116	—	128.5 (138)
Teeth—upper series ..	..	..	..	..	..	47	—	50 (51)
„ lower ..	..	..	..	..	..	48	—	52
Length of humerus ..	..	..	..	..	..	110	—	115
„ femur ..	..	..	..	..	..	143	—	147

3.—*P. mitchelli*.

Basal length ..	..	..	..	..	..	164	—	181
Greatest breadth ..	..	..	..	..	..	127	—	155
Teeth—upper ..	..	..	..	..	..	50	—	52
„ lower ..	..	..	..	..	..	52	—	54
Length of humerus ..	..	..	..	..	..	116	—	128
„ femur ..	..	..	..	..	..	150	—	171

4.—*P. latifrons*.

Basal length ..	..	..	..	..	..	144	—	162
Greatest breadth ..	..	..	..	..	..	116	—	134
Teeth—upper ..	..	..	..	..	..	47	—	52
„ lower ..	..	..	..	..	..	48	—	48.5
Length of humerus ..	..	..	..	..	..	111	—	111
„ femur ..	..	..	..	..	..	135	—	135

The structural peculiarities of *P. latifrons*, such as the very prominent post-orbital processes and the hairy muzzle, serve to distinguish it at once. In regard to the other three groups, the difference is mainly one of size. It will also be noticed that, so far as the measurements are concerned, the Tasmanian species and *P. latifrons* are very closely similar to one another.

The Island species, the Tasmanian and *P. mitchelli* appear to represent three well-marked forms, so far as size is concerned. The

larger Island specimens, of course, approximate in size to the smaller Tasmanian ones, just as the larger Tasmanian ones do to the smaller *P. mitchelli*. In the case of the Tasmanian form, one skull, for which we are indebted to Mr. H. H. Scott, curator of the Launceston Museum, is remarkable for its relatively large size. Its basal length is 163 mm., the next largest being 151 mm., but even this largest Tasmanian skull is slightly smaller in size than the smallest *P. mitchelli*, and it stands out as a giant amongst the Tasmanian specimens. When other bones, such as the humerus and femur of the Island species (Plate 11, Figs. 9-14) are seen side by side with those of the Tasmanian form, the difference in size and in robustness of the bones is very marked, and they clearly indicate two animals of very different form.

The measurements of both the upper and lower tooth series serve also to mark the Island species as distinct. The maximum length of the upper tooth series of the Island species is 45 mm., the minimum of the Tasmanian species being 47 mm., and that of *P. mitchelli* 50 mm. The maximum of the lower tooth series of the Island species is 46 mm.; the minimum of the Tasmanian form is 48 mm., and that of *P. mitchelli* 52 mm.

A reference to Plate 11, Figs. 1 and 2, illustrating respectively side views of the skulls of a King Island and Tasmanian wombat, serve to show not only the difference in size, but one or two features of structural importance in which they differ from one another. In the Tasmanian specimen (and the same is true of *P. mitchelli*) the paroccipital process slants downwards and markedly forwards, in the King Island skulls it always runs nearly straight down, the forward slant being scarcely noticeable. A second point is that in the Island specimens the malar bone is always strongly bowed downwards and outwards beneath the orbit (cf. also Plate 9, Fig. 1, Plate 10, Fig. 1). In regard to the two specimens figured in Plate 11, it will be observed that the snout region in Fig. 1 is distinctly more elongate than the same part in Fig. 2, with the result that, seen from above the nasals, more completely hide the premaxillæ from view in the Island than in the Tasmanian specimen. This feature, though it happens to be rather marked in the two examples figured, is subject to a certain amount of variation, and cannot be relied upon.

The two skins obtained on Flinders Island measure respectively 715 mm. and 675 mm., the latter being slightly incomplete. The hind foot of the first measures 65.5 mm. In the colour and general nature of its fur, the larger specimen, a male, is clearly similar to light-coloured specimens of *P. mitchelli* or the Tasmanian form. In the smaller specimen each hair is light-coloured at the tip, giving a general light greyish-brown colour to the fur, the darker basal part of each hair being hidden from view. This basal part is much more darkly coloured than in the case of the other example. In the

smaller one also, the fur has a curious silky appearance, with small curls all over it, but it is coarse to the touch. There is also a light russet-brown line along the back.

In regard to the mainland species (*P. mitchelli*) and the Tasmanian wombat, the difference in size is not so marked as it is in the case of the Island species when the latter is compared with either of the two former. The exceptionally large specimen of a Tasmanian wombat skull sent to us by Mr. Scott (Plate 9, Fig. 7) is so abnormal in size that we feel it would be misleading to take this as the maximum size of Tasmanian specimens without drawing attention to the difference between it and the largest of all the other Tasmanian skulls. A glance at the measurements detailed in Table 4 will serve to show that this one is abnormal so far as Tasmanian wombats are concerned. We have therefore, in the summarized results of measurements, placed in brackets the figures referring to this skull and have taken the largest of the normal series of specimens as indicating what may be fairly regarded as the maximum size of Tasmanian wombats.

In either case it is evident that, so far as size is concerned, the Tasmanian specimens form a group well marked off from those of the mainland, commonly described under the specific name of *Phascolomys mitchelli*. As Mr. Oldfield Thomas\* says—"The species seems to be well distinguished from *Ph. mitchelli* by this one character of size, but otherwise there appears to be no difference of importance between the two."

As a result of the evidence now available we have come to the conclusion that four species of existing wombats must be recognised, as follows:—

1. *Phascolomys ursinus*†, Shaw. The oldest known species of the genus confined to the Islands of Bass Strait, and now extinct in all so far as known, except Flinders Island. This is considerably the smallest species.  
Type is the specimen sent to Newcastle by Hunter in 1798.
2. *Phascolomys mitchelli*, Owen. The largest species and the most common one on the Australian mainland. It extends over New South Wales, Victoria, and South Australia. The head and body measure 950–1150 mm. The basal length of the skull measures 160–180 mm.  
Type (fossil) in Museum of the Geological Society, London.

\* *Cat. of Marsupialia and Monotremata*, 1888, p. 217.

† For descriptive characters of this cf. "Collection of Sub-fossil Bird and Marsupial Remains from King Island, Bass Strait," Spencer and Kershaw. *Memoirs Nat. Mus.*, Melbourne, iii., p. 29.

3. *Phascolomys latifrons*, Owen. Characterized by the soft silky fur, hairy rhinarium, and prominent post-orbital processes.

Habitat, South Australia.

Type in the Museum of the Royal College of Surgeons.

4. *Phascolomys tasmaniensis*, sp. n. Size medium, intermediate in this respect between *Ph. mitchelli* and *Ph. ursinus*. Total length of the head and body 910 mm. Except in size it agrees closely in external form with *Ph. mitchelli*. Colour grizzled grey. Underfur fairly abundant, especially on the anterior part of the body.

Hairs within the ear light coloured.

Basal length of skull, \* 141 mm. ; greatest width, 116 mm.

Type (male) in National Museum, Melbourne.

Specimens vary somewhat in size, the smallest mature female in our possession having a total length of 780 mm., the largest female measuring 910 mm. One male measures 878, and a second (the type) 910 mm., which is probably about the maximum size of the male form, the female reaching a length of 950 mm.

The variation in colour is very considerable, from grizzled grey to black. In melanistic specimens the distal half of the long hairs is black, the proximal half dark-brown; the underfur is also dark-brown, but it is completely, or almost completely, hidden from sight by the black tips of the abundant long hairs. The hairs within the ear are dark-brown in colour. The general colour of the majority of specimens is grizzled-grey, with, at times, brownish or russet tinged areas. The grizzled appearance is due to the fact that the majority of the hairs are tipped with white, and these are interspersed with long, coarse, dark-tipped hairs, varying in number in different parts. They are frequently abundant enough to give a general dark colour to certain areas, such as the middle line of the back.

The underfur appears to be always noticeably thicker on the anterior part of the body, especially in the shoulder region.

In all specimens, excepting melanistic ones, the hairs within the ear are always light-coloured, sometimes almost white. The chin is brown, throat and chest uniformly light-coloured. There is considerable variation in the coarseness of the hair which is not generally so harsh as in *Ph. mitchelli*.

\* For skull measurements of the type specimen, see Table 4, specimen No. 3.

In the following list we have enumerated the more important memoirs, &c., dealing with the genus *Phascolomys*, and have given a brief outline of their contents, so far as they are concerned, with the history of the species included in the genus.

1. *Bewick*.—*History of Quadrupeds*, 4th edit., p. 522, 1800. Contains in full the letter written by Hunter, accompanying the body of the wombat from Clarke Island sent to Newcastle. Above the letter is a figure of "the Wombach."
2. *Shaw*.—*General Zoology*, 1, Pt. 2, p. 504, 1800. Gives a short description of, presumably, the animal sent to England by Hunter (as no other was then known) under the name of *Didelphys ursina*.
3. *Collins*.—*Account of the English Colony in New South Wales*, 1st ed., vol. ii., p. 153, 1802. 2nd ed., 1804, p. 466. Includes a description of a wombat found by Bass on Cape Barren Island. The description of the teeth is wrong. The animal is figured, the drawing being remarkably similar to the one in *Bewick*.
4. *Geoffroy*.—*Annales du Museum d'histoire naturelle*, vol. 2, 1803, p. 264. Contains a preliminary description of certain animals collected on Baudin's expedition. The generic name of *Phaseolomys* is proposed for the wombat. Reference is made to the animal described by Bass and to the nature of its teeth.
5. *Desmarest*.—*N. Diet. d'hist. nat.*, xxiv., p. 14, 1803. Refers to the animal described by Bass, and calls it *Wombattus fossor*.
6. *Sevastianof*.—*Mem. de l'Acad. de St. Petersbourg*, i., 1807, p. 443, Pl. 17. Describes a skin sent to the Museum in St. Petersburg, and says that it is the same species as the one discovered by Bass and Flinders.
7. *Péron et Freycinet*.—*Voyage de Découvertes aux Terres Australes*, Vol. i., letterpress, 1807; atlas, 1st part, 1808. Gives an account of the finding of wombats on King Island by the naturalists of Baudin's expedition. Plate 28 (1st edit.) represents light and dark varieties of the animals together with young ones, drawn by Lesueur. The animal is called *Phascolomys wombat*, and the locality given is King Island.
8. *Home*.—*Trans. R. S.*, 1808, p. 304. Contains a description of the anatomy of a male wombat. It was one of those taken to England from King Island by Brown, and lived in a domesticated state for two years.

9. *Illiger*.—*Prodromus Syst. Mamm. et Avium*, 1811, pp. 77, 78. Refers to what is evidently the species sent to France from the Bass Strait Islands under the name of *Phascolomys fusca*, and proposes the genus *Amblotis* for Bass' animal, in consequence of the wrong description of teeth given by Collins.
10. *Flinders*.—*A Voyage to Terra Australis*, vol. i, p. 206, 1814. Describes the finding of wombats on King Island in April, 1802. Some were taken to England by Brown.
11. *Leach*.—*Zoological Miscellany*, p. 102, Pl. 96, 1815. Gives a very brief description of the animal, which he calls *Phascolomis vombatus*, together with a figure. He mentions Bewick's and Home's accounts as referring to the same animal, the usual length of which he says is 2 feet.
12. *Cuvier (G.)*.—*Règne Animal*. Tome i., p. 184, Pl. 51, 1817. Says that only one species is known; it is the size of a badger, lives on King Island, and is identical with Shaw's *Didelphis ursina*. Figures a brown variety from a stuffed specimen in the Paris Museum.
13. *Lesson and Garnot*.—In *Duperry Voyage autour du Monde*, Tome i., p. 399, 1826. The authors say that they could only secure one skin of the wombat in Sydney, and that it is only known from the southern coasts of Australia and the Islands of Bass Strait.
14. *Owen*.—*Catalogue, Royal College of Surgeons*, 1831. Gives the distribution of *Phascolomys wombat* as "King Island, and near Port Jackson," and makes no reference to Tasmania.
15. *Owen*.—*P.Z.S.*, p. 49, 1836. Description of the anatomy of *Phascolomys wombat* that had lived in the gardens for five years and weighed  $59\frac{1}{2}$  lbs.
16. *Gunn*.—*Annals Nat. Hist.*, Vol. i., p. 103, 1838. Says that *Phascolomys*, the wombat, is commonly known as the badger, and is found in various parts. One that he caught measured 36 inches in length and 34 in circumference.
17. *Gray*.—*Annals Nat. Hist.*, Vol. i., p. 107, 1838. In a note appended to Gunn's paper (15) Gray says that he has seen Bass' specimen at Newcastle, and that it was the same "as the one we now usually receive from Van Diemen's Land" (The specimen was Hunter's, not Bass').



18. Owen.—In Mitchell's *Three Expeditions into the Interior of Eastern Australia, &c.* Letter, dated May, 1838. Contains original description of *Phascolomys mitchelli*.
19. Waterhouse.—*Jardine's Naturalists' Library*, p. 300, 1841. Describes the animal under the name *Phascolomys wombat*, and gives its distribution as New South Wales, South Australia, and Van Diemen's Land. A short general account of the history of the nomenclature of the animal is also given.
20. Gray.—*List of Specimens of Mammalia in Collection of Brit. Mus.*, p. 95, 1843. Includes a young specimen from Van Diemen's Land.
21. Owen.—In article *Marsupialia* in Todd's *Cyclopedia*, p. 208, fig. 105, 1845. Figures a complete skeleton under the name *Phascolomys fusca*.
22. Owen.—*P.Z.S.*, p. 82, 1845. Gives the specific name *latifrons* to a South Australian form (skull); also exhibits skull of *Phascolomys* from Tasmania.
23. Waterhouse.—*Nat. Hist. of the Mammalia*, p. 246, 1846. Recognises two species—*Ph. wombat* (distribution as in 19), and *Ph. latifrons* from South Australia, and gives a general account of the knowledge of the genus up to date of publication.
24. Gray.—*P.Z.S.*, Pt. xv., p. 41, 1847. Describes and compares skulls from Tasmania and Australia, and suggests possibility of more than one species being confounded under name *Ph. vombatus*.
25. Owen.—*Trans. Z. S.*, p. 303, 1849. Describes and compares the skulls of a Tasmanian wombat as *Ph. latifrons*.
26. Owen.—*Cat. Ost. Ser. R. C. Surgeons*, Vol. i., 1853, p. 344. Describes two skulls from Australia under the name of *Ph. platyrhinus*.
27. Angas.—*P.Z.S.*, p. 268, Pl. 60, 1861. Describes and compares living specimens of the Tasmanian wombat and *Ph. latifrons*.
28. Gould.—*Mammals of Australia*, Introduction, p. 29, Plates 59 and 60, 1863. Recognises *Ph. wombat* from Van Diemen's Land and the Islands in Bass Strait; *Ph. latifrons* from Victoria and South Australia; *Ph. lasiorhinus* from Victoria and South Australia; and describes *Ph. niger* from South Australia (?). He figures the first three.

29. *Gray*.—*A.M.N.H.*, p. 457, Vol. xi., 1863. Describes *Ph. ursinus* from Van Diemen's Land, *Ph. angasii* from South Australia, *Ph. setosus* from Australia. The latter is the specimen figured by Gould as *Ph. latifrons*. Describes the first skin of *Ph. latifrons* that reached England under the name of *Lasiorhinus m'coyi*.
30. *Sclater*.—*A.M.N.H.*, Vol. xii., p. 78, 1863. States that Gray's *Ph. angasii* is identical with Gould's *Ph. niger*.
31. *Murie*.—*P.Z.S.*, p. 838, 1865. Contains general discussion with regard to the species of the genus described up to date. Gives figure of *Ph. latifrons* (animal), and of skulls of *Ph. latifrons*, *Ph. wombat*, and *Ph. platyrhinus*. States that *Ph. platyrhinus* is identical with *Ph. mitchelli*. Recognises *Ph. wombat* and *Ph. platyrhinus*, and *Lasiorhinus* as a sub-genus with the species *Ph. latifrons*.
32. *Murie*.—*P.Z.S.*, p. 798, 1867. Describes *Ph. platyrhinus* at length, and again recognises three species. Figures *Ph. platyrhinus*.
33. *McCoy*.—*P.R.S.*, Victoria, p. 266, 1868. States that the common Victorian species is *Ph. platyrhinus*, of which *Ph. niger* is only a variety, and with which *Ph. angasii* is identical. Recognises *Ph. setosus* as a distinct species.
34. *Krefft*.—*Mammals of Australia*, Text to Plate v. Says that *Ph. wombat* is peculiar to Tasmania and Islands of Bass Strait. *Ph. platyrhinus* occurs in New South Wales and Victoria.
35. *Grimes*.—*Voyage of His Majesty's Colonial Schooner "Cumberland" from Sydney to King Island and Port Phillip in 1802-3*. The journal kept by Flemming was published in *Historical Records of Port Phillip*, edited by John J. Shillinglaw, Melbourne, 1879. Grimes met Baudin at Sea Elephant Bay on the east coast of King Island, and on the return voyage to Sydney discovered the River Yarra. Several references are made to the capture of emus and wombats (called badgers) on King Island.
36. *Thomas*.—*Cat. Marsup. Brit. Mus.* Recognises *Ph. ursinus* of Tasmania and Islands of Bass Strait; *Ph. mitchelli*, the common mainland form; with naked rhinarium and *Ph. latifrons* in South Australia, with hairy rhinarium. The species as recognised by Thomas have been accepted up to the present time.

EXPLANATION OF PLATES.

PLATE 9.

- Fig. 1—*Phascolomys ursinus*. Shaw. King Island.  
Fig. 2—*Phascolomys tasmaniensis*. Sp. n. Juv. Tasmania.  
Fig. 3—*Phascolomys ursinus*. Shaw. King Island.  
Fig. 4—*Phascolomys tasmaniensis*. Sp. n. Tasmania.  
Fig. 5—*Phascolomys ursinus*. Shaw. King Island.  
Fig. 6—*Phascolomys tasmaniensis*. Sp. n. Tasmania.  
Fig. 7—*Phascolomys tasmaniensis*. Sp. n. Tasmania.  
Fig. 8—*Phascolomys mitchelli*. Owen. Victoria.

PLATE 10.

- Fig. 1—*Phascolomys ursinus*. Shaw. King Island.  
Fig. 2—*Phascolomys ursinus*. Shaw. King Island.  
Fig. 3—*Phascolomys ursinus*. Shaw. King Island.

PLATE 11.

- Fig. 1—Side view of skull of *Phascolomys ursinus*. King Island.  
Fig. 2—Side view of skull of *Phascolomys tasmaniensis*. Sp. n.  
Fig. 3—Lower jaw of *Phascolomys ursinus*. King Island.  
Fig. 4—Lower jaw of *Phascolomys ursinus*. King Island.  
Fig. 5—Lower jaw of *Phascolomys tasmaniensis*. Sp. n. Juv. Tasmania.  
Fig. 6—Lower jaw of *Phascolomys mitchelli*. Owen. Victoria.  
Fig. 7—Lower jaw of *Phascolomys tasmaniensis*. Sp. n. Tasmania.  
Fig. 8—Lower jaw of *Phascolomys tasmaniensis*. Sp. n. Tasmania.  
Fig. 9—Femur of *Phascolomys ursinus*. Shaw. King Island.  
Fig. 10—Femur of *Phascolomys tasmaniensis*. Sp. n. Tasmania.  
Fig. 11—Femur of *Phascolomys ursinus*. Shaw. King Island.  
Fig. 12—Femur of *Phascolomys mitchelli*. Owen. Victoria.  
Fig. 13—Humerus of *Phascolomys ursinus*. Shaw. King Island.  
Fig. 14—Humerus of *Phascolomys tasmaniensis*. Sp. n. Tasmania.



Much to our regret we overlooked the description of a new species of hairy-nosed Wombat published by Mr. C. W. de Vis in the Annals of the Queensland Museum, No. 5, p. 14, 1900. Mr. de Vis' description is based upon two entire specimens and a skull secured at St. George, on the Moonie River, in South-eastern Queensland, close to the New South Wales border. Externally it is indistinguishable from the South Australian species, *Phascolomys latifrons*, but Mr. de Vis, as the result of certain cranial peculiarities, regards it as distinct from the latter. In the collection of the National Museum, Melbourne, we have three skins, a stuffed specimen, and skulls of a hairy-nosed Wombat from Deniliquin, in the southern part of New South Wales, close to the Victorian border. One of us,\* since this paper has been in print, has recorded these under the name of *P. latifrons*, thus widely extending the distribution of the species. In regard to the proportions of the skull, the shortness of the frontals, the pronounced ramification of the naso-frontal suture, and the backward cuneiform extension of the same, our Deniliquin specimen agrees to a large extent with those of Mr. de Vis, for which he has proposed the name of *Phascolomys gillespiei*, but we feel considerable doubt as to whether either the Queensland or the New South Wales form is specifically distinct from *P. latifrons*.

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\* J. A. Kershaw. *Victorian Naturalist*, vol. 26, p. 118, 1909